

**Before the  
Federal Communications Commission  
Washington, D.C. 20554**

In the Matter of:	)	
	)	
CTC Telcom, Inc. d/b/a Mosaic Telecom	)	
	)	
Amendment of the Commission's Rules	)	WT Docket No. 07-250
Governing Hearing Aid-Compatible Mobile	)	
Handsets	)	
	)	

To: Chief, Wireless Telecommunications Bureau

**AMENDMENT TO PETITION FOR TEMPORARY WAIVER**

CTC Telcom, Inc. d/b/a Mosaic Telecom ("Mosaic" or "the Company"), by its attorneys, hereby submits this amendment to update the record and to modify the scope of relief sought in its January 15, 2010 petition for temporary waiver of Commission's hearing aid compatibility rules (the "Mosaic Petition").<sup>1</sup>

Mosaic is a Tier III CMRS service provider that offers Wideband CDMA ("WCDMA") service in rural Wisconsin using the 1710-1755/2110-2155 MHz AWS band spectrum. Upon information and belief, Mosaic is still the only service provider in the United States that provides its CMRS service exclusively using the WCDMA air interface in the 1.7/2.1 GHz AWS band (*a.k.a.*, UMTS Band IV). Due to the limited availability of wireless handsets for this particular technical configuration, and unavailability to Mosaic of sufficient handsets with hearing aid compatibility, the Company was forced to seek a waiver of the requirements that at least fifty (50) percent of the handset models offered by Mosaic comply with Rule Section 20.19(b)(1) (*i.e.*, have a rating of M3- or better for radio frequency interference), as well as the requirements contained in Section 20.19(d)(3) of the Rules that at least one-third of the handset models Mosaic

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<sup>1</sup> See CTC Telcom d/b/a Mosaic Telecom *Petition for Temporary Waiver*, WT Docket No. 07-250 (filed January 15, 2010).

offers per air interface comply with Rule Section 20.19(b)(2) (*i.e.*, have a rating of T3- or better for inductive coupling capability). The scope of Mosaic's pending request for relief from these HAC handset requirements is intended to include the period from September 1, 2009, until January 15, 2010 (that portion of the 2009 HAC reporting period when Mosaic was not in full compliance); and due to the continued unavailability of HAC phones that can be used on the Company's network, a waiver is also needed from January 15, 2010 up to and including January 15, 2011 (*i.e.*, the entire 2010 HAC reporting period).<sup>2</sup> Therefore, by this amendment, Mosaic hereby modifies its request for relief, to include the period from September 1, 2009 up to and including January 15, 2012 (*i.e.*, the 2011 HAC reporting period).

Mosaic also wishes to update the record to report that despite ongoing efforts to identify and obtain additional hearing aid compatible handsets that are capable of operating on its network (*i.e.*, devices that utilize the WCDMA air interface in the 1.7 GHz/2.1 GHz AWS bands), its research continues to show that only a limited variety of such devices exist. Moreover, a majority of these devices continue to be unavailable to Mosaic due to their manufacture with another service provider's proprietary software, firmware and/or trademarks. As of the date of this amendment, the Company is able to offer its customers a choice of thirteen (13) distinct AWS-1 Band WCDMA handset models, of which two (2) are rated M3/T3 and one (1) is rated M3. This puts Mosaic in partial compliance with the Commission's Rules. However, due to circumstances beyond its control, including the manufacturer's discontinuance of one M3/T3 phone (the Nokia 6263 – FCC ID QTKRM-207), which Mosaic still has available in limited supply, Mosaic remains unable to meet the 50% M3- or greater and at least 33% T3-

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<sup>2</sup> The Mosaic Petition erroneously used the term "one year" when a 15 ½ month waiver period was originally intended.

or greater HAC handset benchmarks, and the Company continues to require a waiver for the foreseeable future. In support hereof, the following is shown:

### **Discussion**

1. Since filing its Petition for Temporary Waiver on January 15, 2010, Mosaic has continued making diligent attempts to identify additional 1.7/2.1 GHz AWS band handset models that utilize the WCDMA air interface and that offer hearing aid compatibility features. Although one Tier I service provider, T-Mobile USA, Inc. (“T-Mobile”), has incorporated AWS band facilities into its nationwide network, upon information and belief, Mosaic to this day remains the only CMRS service provider in the United States whose network consists solely of 1.7/2.1 GHz WCDMA facilities. In this regard, Mosaic is following the path intended by the Commission, namely, it is a rural telephone company that is deploying advanced wireless services in its rural service area using new technology. One of the primary reasons that Mosaic chose to deploy WCDMA facilities is because the technology provides a direct upgrade path to LTE and “4G” capability. Mosaic has ordered the LTE network equipment and it plans to begin its deployment of these facilities in the first quarter of 2011.

2. The market for 1.7/2.1 GHz WCDMA handsets is still very small and a start-up Tier III mobile service provider such as Mosaic is not large enough to influence the business decisions of wireless chipset and handset manufacturers.

3. Upon review of data from service provider HAC reports that were filed with the FCC last January, Mosaic was able to identify just two CMRS service providers other than itself that offered 1.7/2.1 GHz WCDMA handsets to the public during 2009 – Cincinnati Bell Wireless (“Cincinnati Bell”) and T-Mobile. An important distinction, however, is that both of these service providers operate AWS systems as an adjunct to their larger (*i.e.*, regional or nationwide)

GSM networks. In other words, neither is in the same position as Mosaic (*i.e.*, a Tier III rural service provider that operates an AWS network only). While WCDMA handsets often incorporate GSM functionality, Mosaic does not provide GSM service and the GSM radios in these handsets are not capable of operating on Mosaic's WCDMA network.

4. Starting in September of 2010, Mosaic began offering an additional 1.7/2.1 GHz WCDMA handset model that is rated M4- for operations in the AWS band. This is a high-end smartphone device marketed as the Nokia N900 (FCC ID LJPRX-51X). Because this handset is hearing aid compatible, 3 out of 10 (or 33%) of Mosaic's wireless handsets lineup at that time were rated M3- or better, and 2 out of 10 (or 20%) were rated T3- or better.

5. In July of 2010, Mosaic learned that Nokia had discontinued manufacturing one of the M3/T3 phones that has been available to Mosaic, the Nokia 6263 (FCC ID QTKRM-207). As a result, Mosaic has ceased actively marketing this handset but it has retained a limited supply on hand for testing/sale to customers that use hearing aids.

6. Mosaic has recently learned that it should soon have access to two (2) additional hearing aid compatible phones: the Samsung Vibrant (FCC ID A3LSGHT959), which is rated M3/T3, and the Sharp PV300 (FCC ID APYNAR0065), which is rated M3. The Company expects that these handsets will be available for its customers to test and purchase before the end of the year.

7. Since filing its waiver request last January, Mosaic has found that 1.7/2.1 GHz WCDMA handsets remain limited in quantity and difficult to obtain. Mosaic's efforts to obtain additional 1.7/2.1 GHz WCDMA handsets with hearing aid compatibility continue to be hampered by its small size and limited purchasing power, as well as by trademark/proprietary

restriction issues (*i.e.*, handsets that are branded with another company's name and logo and that have proprietary firmware and software features). Charts showing the hearing aid compatible 1.7/2.1 GHz WCDMA handsets that Mosaic has been able to identify through review of the Commission's records are provided as **Exhibit A**; and **Exhibit B** hereto shows those handsets that manufacturers report as being compliant for WCDMA. Restrictions on Mosaic's ability to use these phones are shown in **Exhibit C**, based on available information from Mosaic's vendors and other sources, and bench testing by the Mosaic technical staff. Mosaic believes that handset exclusivity arrangements may also play a significant role in limiting the general market availability of certain 1.7/2.1 GHz WCDMA handsets with hearing aid compatibility. Congress has recognized the disruptive nature of such arrangements<sup>3</sup> and the FCC currently has this issue under investigation in Docket RM-11497. There is strong evidence in the record that exclusive handset arrangements are harmful to consumers and significantly hamper the ability of small carriers to compete.<sup>4</sup> Indeed, even a much larger Tier II service provider (Cincinnati Bell) has had its ability to obtain WCDMA AWS-band handsets compromised by exclusivity arrangements:

Another negative consequence of the growing trend toward handset exclusivity arrangements is CBW's limited ability to acquire handsets for use on the AWS spectrum purchased in September 2006. After spending over \$25 million to purchase AWS spectrum in the Greater Cincinnati and Dayton markets and an additional \$30 million to build the network necessary to make use of that spectrum, CBW's ability to deliver advanced broadband wireless services to consumers is severely hampered by the limited number of 3G handsets available

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<sup>3</sup> Letter of June 15, 2009, from Sens. John Kerry (D-Mass.), Byron Dorgan (D-ND), Roger Wicker (R-Miss) and Amy Klobuchar (D-Minn) to FCC Commissioner Michael J. Copps (expressing concern regarding the use of wireless handset exclusivity agreements); Letter of July 6, 2009, from Sen. Herb Kohl (D-Wis.), to Assistant U.S. Attorney General Christine Varney and FCC Chairman Julius Genachowski urging the Justice Department and the Federal Communications Commission to investigate competition in the cellphone market, including handset exclusivity arrangements). Copies of these letters are attached hereto as **Exhibit D**.

<sup>4</sup> See, e.g., Rural Cellular Association *Petition for Rulemaking Regarding Exclusivity Arrangements Between Commercial Wireless Carriers and Handset Manufacturers* ("RCA Petition") RM-11497 (filed May 20, 2008); Comments of Corr Wireless Communications, LLC, RM-11497 (filed December 2, 2008) at pp. 2-4; Comments of South Dakota Telecommunications Association, RM-11497 (filed January 29, 2009) at pp. 5-7; Comments of RTG, OPASTCO and NTCA, RM-11497 (filed February 2, 2009) at pp. 3-4.

using the AWS spectrum. For example, CBW and T-Mobile provide service in the same bands for both GSM and AWS spectrum. However, because T-Mobile has entered into exclusive handset deals with Nokia, Samsung, and other manufacturers, CBW's ability to get an adequate inventory of 3G handsets is compromised.<sup>5</sup>

A report derived from January 2010 service provider HAC reports shows that Cincinnati Bell was only able to offer just one hearing aid compatible device to its WCDMA customers during the 2009 reporting period.<sup>6</sup> Mosaic respectfully urges the Commission to look into the harms created by handset exclusivity arrangements with respect to 1.7/2.1 GHz WCDMA handsets.

8. Of the nine (9) total 1.7/2.1 GHz WCDMA hearing aid compatible phones listed on T-Mobile's most recent HAC report, only two (2) devices – the Nokia 3555 (M3/T3) and the Nokia 6263 (M3/T3) – have been available for Mosaic's purchase in "generic" versions that can be used on Mosaic's network (and as mentioned above, the Nokia 6263 has been discontinued). The other seven (7) 1.7/2.1 GHz WCDMA hearing aid compatible phones offered by T-Mobile during the 2009 HAC reporting period are either unavailable from any of Mosaic's vendors (possibly due to exclusivity arrangements), or they are products that were originally manufactured for T-Mobile and that cannot feasibly be modified for use by Mosaic customers (or both). Aside from being branded with T-Mobile logos (which must be obscured) and with T-Mobile packaging and inserts (which must be replaced), the phones come pre-loaded with T-Mobile firmware and software to support proprietary services such as "My Faves" and they display the trademarked "Stick Together" flash screen on startup. Proprietary T-Mobile firmware and software directs these handsets to T-Mobile servers and email sites.<sup>7</sup> Mosaic has found that it is unable to remove this proprietary firmware and software from the few "gray

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<sup>5</sup> Comments of Cincinnati Bell Wireless LLC, RM-11497 (*filed* February 2, 2009) at p. 5.

<sup>6</sup> *See Exhibit A.*

<sup>7</sup> These devices are noted in **Exhibit C**.

market” handsets it was able to obtain. And Mosaic risks entanglement in lawsuits if it tries to sell to its customers phones loaded with another carrier’s proprietary firmware and software.

9. Upon information and belief, at least three (3) 1.7/2.1 GHz WCDMA hearing aid compatible phones listed on T-Mobile’s most recent HAC report, the Blackberry Bold 9700 (M3/T3), the Samsung T659 (M3/T3) and the Sharp PV300 “Sidekick” (M3) have been unavailable from any of Mosaic’s vendors due to exclusivity arrangements. A “generic” version of the Sharp PV300 is expected to be available to Mosaic by the end of 2010, suggesting that the exclusivity arrangement is expiring, and Mosaic plans to offer this phone to its customers as soon as possible. And even if the Blackberry Bold 9700 and Samsung T659 are not currently subject to exclusivity (or if such exclusivity should expire in the near future), upon information and belief, these products are only available with T-Mobile firmware and software, so they could not be used by Mosaic’s customers in any event.

10. In its review of data taken from handset manufacturer hearing aid compatibility reports that were filed with the FCC last summer,<sup>8</sup> Mosaic was able to identify two (2) additional 1.7/2.1 GHz WCDMA handsets that became available for the U.S. market during the first half of 2010 and that offer HAC functionality. These are the HTC Tera PB 65100, aka HTC Touch Pro3 and the LG dLite GD570, and each of these devices is rated M3/T3. Mosaic’s suppliers have been unable to obtain the HTC TouchPro3, and a gray market sample of the LG dLite GD 570 that was tested by Mosaic technical staff was found to be manufactured with T-Mobile proprietary firmware and software, that cannot feasibly be reprogrammed or removed.

11. As a result of the general unavailability of hearing aid compatible 1.7/2.1 GHz

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<sup>8</sup> See **Exhibit B** – info from July 2010 FCC Report on HAC Information by Handset - based on manufacturer Form 655 reports (at [http://www.fcc.gov/Daily\\_Releases/Daily\\_Business/2010/db0730/DOC-300599A1.pdf](http://www.fcc.gov/Daily_Releases/Daily_Business/2010/db0730/DOC-300599A1.pdf)).

WCDMA handsets, firmware/software and trademark issues raised by devices that are available to Mosaic, and the harmful impact of wireless handset exclusivity arrangements, Mosaic finds that it is currently only able to offer its customers a selection of two (2) M3/T3 rated hearing aid compatible handset models and one (1) M3-rated handset – thus leaving it short of the 50% M3- or better and 33% T3- or better HAC handset benchmarks set forth in the Commission’s Rules.

12. Mosaic wishes to assure the Commission that it is committed to providing its hearing impaired subscribers with a wider selection of 1.7/2.1 GHz WCDMA handsets that meet an M3- and/or T3- rating under ANSI Standard C63.19 at the earliest practicable date, and that it will do so promptly once these handsets become generally available to Tier III carriers. Mosaic again emphasizes that the Company is partially compliant with the Commission’s requirements because it currently markets every hearing aid compatible 1.7/2.1 GHz WCDMA handset that it has been able to identify and that is available to it. Mosaic’s customers with hearing impairment currently do have a selection of products from which to choose, and Mosaic is committed to increasing this selection as soon as additional compliant devices are available.

### **Waiver Standard**

13. The Commission has indicated generally that waiver requests of the Hearing Aid Compatible (“HAC”) digital wireless handset requirements will be evaluated under the general waiver standard set forth in Sections 1.3 and 1.925 of the Rules and the standards set forth in WAIT Radio v. FCC, 418 F.2d 1153 (D.C. Cir. 1969), *appeal after remand*, 459 F.2d 1203 (D.C. Cir. 1972), *cert. denied*, 409 U.S. 1027 (1972) and Northeast Cellular Telephone Company v. FCC, 897 F.2d 1164 (D.C. Cir. 1990). Hearing Aid Compatible Telephones (WT Docket No. 01-309 – *Order on Reconsideration and Further Notice of Proposed Rulemaking*), FCC 05-122, released June 21, 2005 at Para. No. 50 (“*HAC Order on Reconsideration*”).



14. Section 1.3 of the Rules states, in relevant part, that “[a]ny provision of the rules may be waived by the Commission on its own motion or on petition if good cause therefor is shown.” Section 1.925(b)(3) of the Rules states that the “Commission may grant a waiver request if it is shown that: (i) [t]he underlying purpose of the rule(s) would not be served or would be frustrated by application to the instant case, and that a grant of the requested waiver would be in the public interest; or (ii) [i]n view of unique or unusual factual circumstances of the instant case, application of the rule(s) would be inequitable, unduly burdensome or contrary to the public interest, or the applicant has no reasonable alternative.” Under WAIT Radio and Northeast Cellular Telephone Company, a rule waiver “may be granted in instances where the particular facts make strict compliance inconsistent with the public interest if applied to the petitioner and when the relief requested would not undermine the policy objective of the rule in question.” *HAC Order on Reconsideration*, Para. 50 (note 158).

**A. A Waiver Is Warranted Because Compliant Handset Models that Use the 1.7/2.1 GHz WCDMA Air Interface are Not Commercially Available to Mosaic**

15. A waiver is warranted in Mosaic’s case because of the unavailability of hearing aid compatible wireless handsets models that are capable of operating on Mosaic’s 1.7/2.1 GHz (AWS-1 Band) WCDMA network. After discussions with handset dealers, and review of information from recent hearing aid compatibility reports filed with the FCC by CMRS service providers and handset manufacturers, Mosaic has identified a limited number of AWS-1 Band WCDMA phones that have hearing aid compatibility features. Mosaic’s testing of handsets it was able to obtain on the “gray market” has found that they cannot be offered to customers due to proprietary firmware and software that render many features inoperable, as well as branding and icons for another carrier’s proprietary services that are unable to be removed. Other hearing aid compatible handset models that Mosaic’s customers might be able to use are unavailable to

Mosaic due to ongoing exclusivity agreements with another carrier. As a result, Mosaic's full compliance with the requirements of the Commission's HAC Rules is impossible, and a temporary waiver of these requirements is clearly warranted.

16. In adopting the Rule Section 20.19(c)(3) and (d)(3) HAC handset minimum percentage benchmarks, the Commission projected (but, obviously, could not assure) that a sufficient number of models of digital wireless handsets meeting the M3- and T3- standards would be made available by the manufacturers for purchase by smaller carriers by the relevant benchmark dates. *See* Amendment of the Commission's Rules Governing Hearing Aid-Compatible Mobile Handsets, WT Docket No. 07-250, *First Report and Order*, 44 CR 565 23 FCC Rcd 3406 FCC 08-68 23 FCC Rcd 3406 (2008). While significant progress has been made toward developing compliant handsets for more common air interface technologies and frequency bands, it does not appear that research, development and manufacturing activities have reached the point where the handset manufacturers can make a sufficient number of models of compliant handsets commercially available to WCDMA service providers that utilize the AWS-1 Bands and that do not purchase handsets in quantities comparable to Tier I carriers. Moreover, because the market for 1.7/2.1 GHz WCDMA handsets remains so small, third-party distributors have not helped to drive handset manufacturing and availability for smaller carriers. Even assuming that new 1.7/2.1 GHz WCDMA handsets become available, there is no guarantee that these devices will be hearing aid compatible or that availability of other new 1.7/2.1 GHz WCDMA devices with hearing aid compatibility will not be restricted due to proprietary software, firmware, branding or handset exclusivity agreements. As a simple matter of economics (and if the past is prologue), handset manufacturers will continue to focus their efforts on meeting the needs of the larger (*i.e.*, Tier I) carriers, to the exclusion of smaller carriers.

17. Given these unique facts and circumstances, Mosaic submits that the temporary relief it has requested is warranted and in the public interest, and that good cause exists to grant its request for temporary waiver. In this case, it is impossible for Mosaic to comply with the 50% M3-rated benchmark because of the limited availability of compliant 1.7/2.1 GHz WCDMA handsets, technical and trademark issues, and handset exclusivity arrangements. Mosaic is unable to comply with the 33% T3-rated because it has identified just two (2) T3-rated 1.7/2.1 GHz WCDMA phones that are capable of operating on its network. Mosaic has offered both to its customers. One of these (an M3/T3-rated device) has been discontinued by the manufacturer and Mosaic has only a limited supply remaining. However, an additional M3/T3 handset model (and one that was previously subject to an exclusivity arrangement) is expected to be available to Mosaic by the end of the year. Because this phone uses the Android operating system, it should be capable of being reprogrammed to operate on Mosaic's 1.7/2.1 GHz WCDMA network.

18. Where the Commission's projections of technological feasibility and commercial availability do not pan out, waiver of the requirements would appear to be particularly appropriate. Indeed, basic principles of administrative law prohibit the Commission from compelling carriers to do the impossible. *See, e.g., Alliance for Cannabis Therapeutics v. DEA*, 930 F.2d 936, 940 (D.C. Cir. 1991); *Hughey v. JMS Development Corp.*, 78 F.3d 1523, 1530 (11<sup>th</sup> Cir. 1996). Furthermore, the Commission has acknowledged that Tier II and Tier III CMRS carriers "have much less ability than the nationwide CMRS carriers to obtain specific vendor commitments necessary" to deploy the equipment needed to meet regulatory requirements; that "handset vendors ... give priority to the larger, nationwide carriers;" that the deployment needs of the larger carriers create "downstream delays for Tier II and III carriers;" and, accordingly, "that there are temporary and special circumstances applicable to [Tier II and Tier III carriers] that constitute a sufficient basis to grant a stay on a limited and temporary

basis” from Commission-imposed regulatory requirements. *See Non-Nationwide Carriers Order*, 17 FCC Rcd. 14841, Para Nos. 10 and 11 (2002). *See also*, FCI 900, Inc., 16 FCC Rcd. 11072 (Comm. Wir. Div., WTB 2001) (granting all 900 MHz MTA licensees an extension of the construction deadline so that they might deploy advanced digital 900 MHz systems, where the subject digital voice equipment was not commercially available in sufficient quantities in time to meet the five-year construction deadline).<sup>9</sup> Mosaic simply has no control over the equipment development, manufacturing and distribution practices of the handset manufacturers. The lack of sufficient, available digital wireless handset models for the 1.7/2.1 GHz WCDMA air interface that meet the Commission’s HAC requirements is clearly a circumstance clearly beyond a small carrier’s control. In view of the unique or unusual factual circumstances present here, application of the rule would clearly be inequitable, unduly burdensome and contrary to the public interest. In view of the fact only a small selection of compliant digital wireless handset models is currently available for the WCDMA 1700 (at least for purchase by smaller carriers), Mosaic clearly has no reasonable alternative but to request the instant waiver.

19. Mosaic wishes to assure the Commission that it is committed to providing its hearing impaired subscribers with a wider selection of 1.7/2.1 GHz WCDMA handsets meeting an M3- and/or T3- rating under ANSI Standard C63.19 at the earliest practicable date, and that it will do so promptly once these handsets become generally available to Tier III carriers. In this regard, Mosaic wishes to emphasize that it is partially compliant with the Commission’s requirements because it currently markets two (2) handset models that meet an M3/T3 rating and

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<sup>9</sup> Additional case precedent supports this position. *See Leap Wireless International, Inc.*, 16 FCC Rcd. 19573 (Comm. Wir. Div., WTB (2001) (granting extension of time so that licensee might deploy “high data rate” wireless technology that was not available in time to meet the five-year construction requirement); Monet Mobile Networks, Inc., 17 FCC Rcd. 6452 (Comm. Wir. Div., WTB 2002) (granting extension of time so that licensee might deploy “high data rate” wireless technology that was not available in time to meet the five-year construction requirement); and Warren C. Havens, Mimeo DA 04-2100, adopted July 12, 2004 (granting extension of the five-year construction requirement for 220 MHz licensees to allow for the use of next-generation digital technology in the band).

one (1) handset model that meets an M3 rating under ANSI standard C63.19. Thus, its hearing-impaired customers have a choice of hearing aid compatible products; and Mosaic will increase the number of choices as soon as additional handsets become available.

**WHEREFORE**, good cause shown, Mosaic requests that January 15, 2010 Petition for Temporary Waiver, as amended herein, be granted.

Respectfully submitted,

**CTC Telcom, Inc. d/b/a Mosaic Telecom**

A handwritten signature in black ink, appearing to read 'Cary Mitchell', is positioned above a horizontal line.

D. Cary Mitchell  
Its Attorney

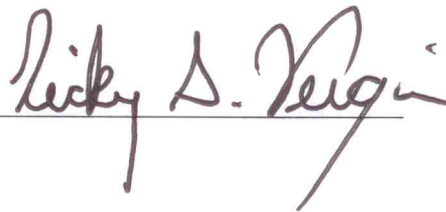
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Filed: November 19, 2010

**DECLARATION UNDER PENALTY OF PERJURY OF RICKY S. VERGIN**

1. My name is Ricky S. Vergin, and I am the President of CTC Telcom, Inc. d/b/a Mosaic Telecom, P.O. Box 64, Cameron, WI 54822.
2. I hereby certify under penalty of perjury that I have reviewed the foregoing Amendment to Petition for Temporary Waiver, and except for those matters of which the Federal Communications Commission may take official notice, or those matters attributed to other persons, the factual assertions set forth in the Petition are true and correct to the best of my knowledge.

Signed: \_\_\_\_\_



Dated: November 19, 2010

## DECLARATION

I, Andy Rick, hereby declare under penalty of perjury as follows:

I am the Systems Engineer of CTC Telcom, Inc. d/b/a Mosaic Telecom ("Mosaic"). I have worked with Mosaic for 4 years. I graduated in 1999 with an Associates Degree in Computer Science from Wisconsin Indianhead Technical College. Since 1999, I have worked in the technical field as a Network Support, Server Support and PC Support Technician. I was a PC Systems Manager for Nash Finch Company, in charge of two employees and up to 1,200 personal computers. I am currently employed with Mosaic Telecom and work in several different capacities, including cellular phone testing and data testing for our wireless product.

1. Since July 2009, I have been tasked with helping the Mosaic to identify, test and obtain wireless handsets for the Company's AWS band WCDMA network, including handsets that provide hearing aid compatibility features in accordance with the FCC HAC requirements.
2. In connection with this effort, I tested every HAC compliant handset that the Company has been able to obtain, to determine if it could be used by Mosaic's customers. The results of this testing are set forth in the attached table. Overall, most of the available HAC compliant handsets are not usable by Mosaic's customers, because they have been manufactured with T-Mobile firmware and software that directs these handsets to T-Mobile servers and email sites. This

proprietary firmware and software is also used to support T-Mobile services such as "My Faves" and the trademarked "Stick Together" flash screen on startup, and it cannot feasibly be removed or reprogrammed.

Executed on this 18<sup>th</sup> day of November, 2010.

Signed: Andy R. de  
Name: Andy R. de



## Exhibit A

### HAC Compatible WCDMA AWS-1 Band Phones Offered by Service Providers during 2009

per FCC Web Site – <http://wireless.fcc.gov/hac/index.htm>

#### LIST OF HEARING AID COMPATIBLE WIRELESS HANDSETS

Listed by Wireless Service Provider - [http://hraunfoss.fcc.gov/edocs\\_public/attachmatch/DOC-296984A1.pdf](http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-296984A1.pdf)

#### Cincinnati Bell Wireless, LLC

Nokia 3555	QMNRM-257	M3/T3	<i>(Mosaic offers this model)</i>
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#### CTC Telecom, Inc. d/b/a Mosaic Telecom

Nokia 3555	QMNRM-257	M3/T3	<i>(Mosaic offers this model)</i>
Nokia 6263	QTKRM-207	M3/T3	<i>(Mosaic offers this model)</i>

#### T-Mobile USA

Nokia 3555	QMNRM-257	M3/T3	<i>(Mosaic offers this model)</i>
Nokia 3711	PPIRM-511	M3/T3	<i>(Gray market – T Mobile branded-T Mobile software and firmware issues)</i>
Nokia 6263	QTKRM-207	M3/T3	<i>(Mosaic offers this model)</i>
RIM 9700	L6ARCN70UW	M3/T3	<i>(Unavailable to CTC/Mosaic from any 3<sup>rd</sup> party vendor – Exclusivity?)</i>
Samsung SGH-T919	A3LSGHT919	M3	<i>(Gray market – T Mobile branded-T Mobile software and firmware issues)</i>
Samsung SGH-T929	A3LSGHT929	M3	<i>(Gray market – T Mobile branded-T Mobile software and firmware issues)</i>
Samsung T659	A3LSGHT659	M3/T3	<i>(Unavailable to CTC/Mosaic from any 3<sup>rd</sup> party vendor – Exclusivity?)</i>
Sharp Sidekick LX 2009	APRNAY0065	M3	<i>(Device becomes “generic” – and should be available to Mosaic in Mid-November)</i>
Sony Ericsson TM747	PY7A3880030	M3/T3	<i>(Gray market – T Mobile branded-T Mobile software and firmware issues)</i>

## Exhibit B

### HAC Compatible WCDMA AWS-1 Band Phones Offered by Manufacturers from June 2009 to June 2010

per FCC Web Site – <http://wireless.fcc.gov/hac/index.htm>

#### LIST OF HEARING AID COMPATIBLE WIRELESS HANDSETS

Listed by Handset - [http://www.fcc.gov/Daily\\_Releases/Daily\\_Business/2010/db0730/DOC-300599A1.pdf](http://www.fcc.gov/Daily_Releases/Daily_Business/2010/db0730/DOC-300599A1.pdf)

Manufacturer	FCC ID No.	Availability	Air interfaces	HAC rating (if any)
HTC PB65100	NM8PB65100	05/10 - 06/10	GSM, WCDMA, GSM 850, 1700, 1900	M3 / T3
LG GD570AQ, GD570PK	BEJGD570, BEJGD570	06/10 - 06/10	GSM, WCDMA, GSM 850, 1700, 1900	M3 / T3
Nokia 3555	QMNRM-257	07/09 to 01/10	GSM, WCDMA, GSM, WCDMA 850, 1700, 1900, 2100	M3/T3
Nokia 3711	PPIRM-511	10/09 to 06/10	GSM, WCDMA, GSM, WCDMA 850, 1700, 1900, 2100	M3/T3
Nokia 6263	QTKRM-207	07/09 to 01/10	GSM, WCDMA, GSM, WCDMA 850, 1700, 1900, 2100	M3/T3
RIM Blackberry 9700	L6ARCM70UW, L6ARCN70UW	11/09 - 06/10	GSM, WCDMA, WCDMA, GSM, WCDMA 850, 850, 1700, 1900, 1900	M3/T3
Samsung SGH-T659	A3LSGHT659	07/09 - 05/10	GSM, WCDMA, GSM 850, 1700, 1900	M3/T3
Samsung SGH-T919	A3LSGHT919	09/08 - 11/09	GSM, WCDMA, GSM 850, 1700, 1900	M3
Samsung SGH-T929	A3LSGHT929	12/08 - 06/10	GSM, WCDMA, GSM 850, 1700, 1900	M3
Sharp PV300	APYNAR0065	04/09 - 06/10	GSM, WCDMA, GSM 850, 1700, 1900	M3
Sony Ericsson Equinox	PY7A3880030	07/09 - 06/10	GSM, WCDMA, GSM 850, 1700, 1900	M3/T4

**MOSAIC TELECOM*****Hearing aid compatible AWS handsets - acquisition and test results***

Model	FCC ID	Model Name	HAC	Mosaic Tested	Type	Test Results	Carried by Mosaic
HTC PB65100	NM8PB65100	My Touch 3G	M3/T3	NO - UNABLE TO OBTAIN	Mfg for T-Mobile	N/A	NO
LG GD570AQ,	BEJGD570,	dLite	M3/T3	YES	Mfg for T-Mobile	<i>Gray- fw/sw/tm issues</i>	NO **
Nokia 3555	QMNRM-257	3555	M3/T3	YES	Generic	N/A	YES
Nokia 3711	PPIRM-511	3711	M3/T3	YES	Mfg for T-Mobile	<i>Gray- fw/sw/tm issues</i>	NO **
Nokia 6263	QTKRM-207	6263	M3/T3	YES	Generic	PASSED	YES *
Nokia N900	LJPRX-51	N900	M3	YES	Generic	PASSED	YES
RIM Blackberry 9700	L6ARCM70UW, L6ARCN70UW	Curve	M3/T3	NO - UNABLE TO OBTAIN	Mfg for T-Mobile	N/A	NO
Samsung SGH-T659	A3LSGHT659	659	M3/T3	NO - UNABLE TO OBTAIN	Mfg for T-Mobile	N/A	NO
Samsung SGH-T919	A3LSGHT919	Behold	M3	YES	Mfg for T-Mobile	<i>Gray- fw/sw/tm issues</i>	NO **
Samsung SGH-T929	A3LSGHT929	Memoir	M3	NO - UNABLE TO OBTAIN	Mfg for T-Mobile	N/A	NO
Samsung SGH-T959	A3LSGHT959	Vibrant	M3/T3	YES	Mfg for T-Mobile	PASSED	avail - 12-31-10
Sharp PV300	APYNAR0065	PV300	M3	NO - avail. by 12-31-10	Generic	N/A	avail - 12-31-10
Sony Ericsson Equinox	PY7A3880030	Equinox	M3/T4	NO - UNABLE TO OBTAIN	Mfg for T-Mobile	N/A	NO

**NOTES:**

\* Manufacturer has discontinued production

# T Mobile logos and software/firmware were able to be removed so Mosaic can carry

\*\* T Mobile logos, software, firmware were unable to be removed

## **Exhibit D**

### **Congressional Letters re: Harmful Effects of Wireless Handset Exclusivity**

Letter of June 15, 2009, from Sens. John Kerry (D-Mass.), Byron Dorgan (D-ND), Roger Wicker (R-Miss) and Amy Klobuchar (D-Minn) to FCC Commissioner Michael J. Copps

Letter of July 6, 2009, from Sen. Herb Kohl (D-Wis.), to Assistant U.S. Attorney General Christine Varney and FCC Chairman Julius Genachowski

# United States Senate

WASHINGTON, DC 20510

June 15, 2009

The Honorable Michael J. Copps  
Acting Chairman  
Offices of the Commissioners  
Federal Communications Commission  
445 12<sup>th</sup> Street, SW  
Room 8B201  
Washington, DC 20554

Dear Chairman Copps,

We write to express our concern regarding the use of exclusivity arrangements between commercial wireless carriers and handset manufacturers with respect to wireless handsets that are made available to consumers. On May 20<sup>th</sup>, 2008, a petition for rulemaking on this subject was filed by the Rural Cellular Association, and a number of comments were subsequently filed by small and large commercial wireless carriers, consumer groups, regulatory agencies and handset manufacturers. These comments detailed both the benefits served by these agreements to those entities in position to take advantage of them as well as the challenges they pose in terms of maximizing consumer choice and competition within the marketplace. As a result of this process, there is a comprehensive record on the subject of exclusivity agreements for study by the Commission.

Based on this record, we ask that you examine this issue carefully and act expeditiously should you find that exclusivity agreements unfairly restrict consumer choice or adversely impact competition in the commercial wireless marketplace. We ask that you consider the following factors in making this determination:

- Whether exclusivity agreements are becoming increasingly prevalent between dominant wireless carriers and handset manufacturers;
- Whether exclusivity agreements are restricting consumer choice with respect to which handsets are available depending on a consumer's geographic region, particularly for consumers living in rural America;
- Whether exclusivity agreements place limitations on a consumer's ability to take full advantage of handset technologies, such as the ability to send multimedia messages or the ability to "tether" a device to a computer for internet use;
- Whether exclusivity agreements are manipulating the competitive marketplace between commercial wireless carriers. Specifically, whether the ability for a dominant carrier to reach an exclusive agreement with a handset manufacturer is inhibiting the ability of smaller, more regional carriers to compete; and
- Whether exclusivity agreements play a role in encouraging or discouraging innovation within the handset marketplace.

The Senate Committee on Commerce, Science and Transportation will convene a hearing this week to examine issues confronting wireless consumers. The subject of exclusivity agreements between wireless carriers and handset manufacturers will be a focal point of this

The Honorable Michael J. Copps  
June 15, 2009  
Page 2

hearing, and the record will help to determine whether legislative action is also necessary. We look forward to your continued attention to this issue, and to a swift examination into the impact of exclusive agreements on the wireless marketplace.

Sincerely,

Handwritten signature of John F. Kerry in blue ink.

John F. Kerry

Handwritten signature of Roger F. Wicker in blue ink.

Roger F. Wicker

Handwritten signature of Byron L. Dorgan in blue ink.

Byron L. Dorgan

Handwritten signature of Amy Klobuchar in blue ink.

Amy Klobuchar

# United States Senate

COMMITTEE ON THE JUDICIARY

WASHINGTON, DC 20510-6275

July 6, 2009

Hon. Christine Varney  
Assistant Attorney General  
Antitrust Division  
U.S. Department of Justice  
Washington, D.C.

Hon. Julius Genachowski  
Chairman  
Federal Communications Commission  
Washington, D.C.

Dear Assistant Attorney General Varney and Chairman Genachowski:

I am writing regarding competition in the cell phone market. Wireless telephones have become a vital means of communications for the vast majority of Americans, with over 270 million subscribers nationwide. Recently, we on the Antitrust Subcommittee have become concerned with emerging barriers to competition in an already highly concentrated market. Four carriers control over 90% of the cell phone market, and two of them collectively have a market share of 60%. I therefore believe it is vitally important that the FCC and Justice Department take action to enhance competition in this market and to remove barriers to competition preventing the emergence of new competitors.

On June 16, the Antitrust Subcommittee held hearings on rising text message prices and the state of competition in the cell phone industry generally. Our hearing came after a doubling of text message prices charged by the four largest carriers on a per message basis from 2006 to 2008. In the span of two years, the four leading carriers raised text messaging prices charged on per message basis from 10 to 20 cents per message. These lockstep price increases occurred despite the fact that it did not appear to be justified in any respect by rising costs in delivering text messages, which an expert at our hearing testified cost about 0.3 cents per message to transmit.

The cell phone companies testified that they did not coordinate their price increases in any way, and we received no evidence to contradict this testimony. Nonetheless, these identical price increases are hardly consistent with the vigorous price competition we hope to see in a competitive marketplace. Indeed, these price increases may represent a warning sign for the state of competition in the cell phone market. I am concerned that the concentrated nature of the cell phone marketplace could lead to future price increases for this and other cell phone services relied upon by millions of Americans.

I therefore urge that the Justice Department and FCC take action to ensure that the wireless telephone market is open to competition, and to remove undue barriers to entry and expansion by new competitors. With respect to the FCC, these actions include:

(i) **Strengthening Roaming Requirements** – It is essential that competitive cell phone carriers have reasonable access to interconnect with the networks of the established carriers (generally referred to as “roaming”) in order to have a fair chance to compete. In 2007, the FCC clarified that automatic roaming is a common carrier service that must be provided on just, reasonable, and nondiscriminatory terms. See Report and Order and Further Notice of Proposed Rulemaking, 22 FCC Rcd 15817 (2007). But the FCC limited its decision in two critical respects, both of which are the subject of additional pending proceedings.

First, the FCC implemented the so-called “in-market exception” that permits carriers to refuse roaming agreements where the requesting carrier holds an overlapping spectrum license or lease. Because a number of licenses purchased by small and regional carriers in recent auctions are quite large, they will take years to build out -- meaning that the in-market exception in many cases results in a severe limitation or outright denial of roaming service to consumers (particularly underserved consumers whose primary access to wireless service is through small and mid-sized carrier flat-rate offerings). Several carriers have filed petitions for reconsideration in WT Docket No. 05-265 that are primarily focused on eliminating the in-market exception, and those petitions are still pending. Except for AT&T and Verizon, the entire wireless industry (including Sprint, T-Mobile, Cricket, MetroPCS, US Cellular, and hundreds of rural carriers) supports repeal of the in-market exception. I urge the FCC to repeal this exemption

Second is the issue of “data roaming,” the ability of carriers to gain roaming for data – such things as internet connections and email. These applications are essential to building a competitive cell phone service, given the millions of consumers who use “smart phones” for these applications. To date, the FCC has declined to impose any obligation for data roaming for wireless broadband. The FCC has instead sought further comment on whether automatic roaming should apply to data, but so far it has not taken any action on that score. An automatic data roaming obligation is critical to the continued growth of competitive wireless service offerings that will discipline the pricing and services of the large incumbent wireless operators. I urge the FCC to require carriers to provide data, as well as voice roaming, on just, reasonable and nondiscriminatory terms.

(ii) **Spectrum Constraints** In the 1990s, the FCC allocated a considerable amount of new spectrum for wireless services and adopted regulations to ensure that the spectrum was allocated among a range of wireless providers. Since 2001, however, the FCC has taken a more “hands-off” approach, and consequently, the nation's largest carriers have systematically absorbed smaller providers and acquired the lion's share of spectrum made available at auction. Most recently, AT&T and Verizon dominated the 700 MHz auction, paying approximately \$16 billion for new licenses -- or 84 percent of auction revenues. Small and mid-sized carriers have urged the FCC (i) to identify and



allocate additional spectrum to meet the growing demand for wireless voice, broadband and other advanced data services, and (ii) to adopt auction eligibility regulations to ensure that licenses are assigned to a range of different providers to promote competition and prevent the nation's largest providers from stockpiling even more spectrum. I urge the FCC to adopt pro-competitive spectrum policies so that new and emerging cell phone carriers can compete with established carriers.

(iii) **Handset exclusivity.** The practice of the large cell phone companies gaining exclusive deals to the most in-demand cell phones is a serious barrier to competition. Consumers are unlikely to obtain cell phone service from companies if they cannot obtain desired handsets. In 2008, the Rural Cellular Association petitioned the FCC to begin a rulemaking to evaluate exclusivity arrangements between wireless carriers and handset manufacturers. *See* Rural Cellular Association, Petition for Rulemaking Regarding Exclusivity Arrangements Between Commercial Wireless Carriers and Handset Manufacturers, RM-11497 (May 20, 2008). Earlier this month, then Acting Commissioner Copps stated in a speech that he "agree[s] that [the FCC] should open a proceeding to closely examine handset exclusivity arrangements that have reportedly become more prevalent in recent years," and instructed the Wireless Bureau "to begin crafting such an item." Remarks of FCC Acting Chairman Michael J. Copps, Pike & Fischer's Broadband Policy Summit V (June 18, 2009). I concur with this view and urge the FCC to examine this issue closely, and take action to prevent the dominant cell phone providers from gaining exclusive access to the most in-demand cell phones.

(iv) **Early termination fees.** With many consumers signing two year contracts, expensive early termination fees can constitute a substantial barrier to competition. Early termination fees should be prorated, so that consumers do not face substantial penalties for switching to a different cell phone providers. At our June 16 hearing, for example, AT&T testified that in a two year contract the \$ 175 early termination fee was reduced by \$ 5 per month, leaving a \$ 60 balance owed if the consumer terminated the contract with one month remaining. Early termination fees that are not pro-rated in proportion to the time remaining on the contract are effectively a penalty to consumers who wish to switch cell phone providers.

(v) **Special Access.** It is essential that the FCC take action to ensure with respect to reform of special access regulations. Wireless competitors depend on reasonable special access rates to the incumbent phone companies' networks in order to connect their calls. A GAO Report issued on November 26, 2006 found that little competition existed for special access connections in much of the country. In 2005, the FCC released a Notice of Proposed Rulemaking to examine the regulatory framework to apply a price cap on interstate special access services. *See Special Access Rates for Price Cap Local Exchange Carriers*, WC Docket No. 05-25, *AT&T Corp. Petition for Rulemaking to Reform Regulation of Incumbent Local Exchange Carrier Rates for Interstate Special Access Services*, RM-10593, Order and Notice of Proposed Rulemaking, 20 FCC Rcd 1994 (2005). In 2007, the Commission asked the parties to refresh the record with additional information. *See* FCC Public Notice, *Parties Asked to Refresh Record in the Special Access Notice of Proposed Rulemaking*, 22 FCC Rcd 13352 (2007). The

Commission has not yet acted on that issue. I urge the FCC to take action so that special access rates do not constitute an additional barrier to competition.

**(vi) Commercial Mobile Radio Service Competition Report.** The FCC is currently conducting its annual review of the wireless market. In preparing the Fourteenth Annual report, we strongly urge the FCC to consider a broader range of factors within its current standard framework for evaluating competition. Specifically, in considering the market structure, the FCC should conform to traditional antitrust conclusions regarding appropriate HHI levels for determining the existence of competition. The choices that matter most to consumers are the plans and providers available to them in their area. The FCC should also examine the impact of HHIs at the regional level.

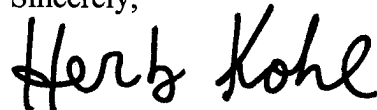
In considering the conduct of cell phone companies, the FCC should examine parallel pricing and parallel conduct from providers. In evaluating consumer behavior and choice, the FCC should consider the impact of early termination fees, lengthy contracts, and handset exclusivity arrangements. Finally, it is critical that the Commission take a close look at substantial barriers to entry and growth in the wireless markets, including limited access to spectrum, excessive costs for special access services, and loopholes in the existing roaming regulations.

FCC action on these items can remove unnecessary barriers to competitive and ensure a competitive cell phone market for the benefit of consumers. I look forward to working with the FCC on these issues.

With respect to the Justice Department, we urge that the Antitrust Division closely examine the cell phone industry to insure that dominant carriers do not take action to stifle competition or engage in conduct contrary injurious to competition in violation of antitrust law. I urge the Department to take all actions necessary to ensure that the market remain open to competition. I also urge that the Department closely scrutinize any future mergers or acquisitions proposed in this industry to ensure that they are not likely to cause any substantial injury to competition.

Thank you both for your attention to this matter.

Sincerely,

A handwritten signature in black ink that reads "Herb Kohl". The signature is written in a cursive, slightly stylized font. The "H" is large and loops around the "e", and the "K" is also large and loops around the "o". The "l" is a simple vertical stroke.

---

HERB KOHL

Chairman, Subcommittee on  
Antitrust, Competition Policy, and  
Consumer Rights